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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,894	06/25/2003	James D. Burrington	3243	4894

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EXAMINER

COSTALES, SHRUTI S

ART UNIT PAPER NUMBER

1714

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/603,894

Applicant(s)

BURRINGTON ET AL.

Examiner

Shruti S. Costales

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4-9 and 11-27 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,4-9 and 11-27 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. All outstanding objections and rejections except for those described below are overcome by applicant's amendment filed September 16, 2005.

2. It is noted that applicant has amended the claims and has added a new claim. The amended claims have limitations that were not before the Examiner previously, therein necessitating new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

### ***Claim Rejections - 35 USC § 112***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

4. Claims 5-8 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More particularly, claim 5 recites the limitation "component A", claim 6 recites the limitation "component B", and claim 7 recites the limitation "component C", wherein there is insufficient antecedent basis for each of said limitations in claims 5-7. Further, claim 8 is rejected under 35 U.S.C. § 112, second paragraph, as being dependent from a rejected base claim.

***Claim Rejections - 35 USC § 102***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

6. Claims 1, 5-8, 11, and 27 are rejected under 35 U.S.C. § 102(e) as being anticipated by Burrington et al. (U.S. Patent Number 6,843,916).

The rejection is adequately set forth in paragraph 9 of the office action mailed June 27, 2005 and is herein incorporated by reference.

***Claim Rejections - 35 USC § 103***

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

8. Claims 1, 4-8, and 11-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wallace (U.S. Patent Number 5,944,858) in view of Higton et al. (U.S. Patent Number 6,310,010).

Wallace discloses an additive composition not only capable of reducing the amount of soot, smoke and/or carbonaceous products produced on combustion of the fuel (Col. 2, lines 29-34) but that is also capable of reducing or inhibiting the amount of noxious emissions (e.g., carbon monoxide, unburned hydrocarbons, polyaromatic hydrocarbons, and/or particulates) formed when using the fuels in an engine or in a burner or like combustion apparatus (Col. 2, lines 39-45). The additive composition of

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Wallace comprises a) one or more fuel soluble manganese carbonyl compounds, b) one or more fuel soluble alkali or alkaline earth metal containing detergents, c) at least one fuel soluble ashless dispersant, d) at least one fuel soluble demulsifying agent, e) at least one aliphatic or cycloaliphatic amine, and f) at least one metal deactivator (Col. 2, lines 48-67 and Col. 3, lines 1-11). The detergents of Wallace include phenates, sulfonates, salicylates, and salts of carboxylic acids, wherein the metals are sodium, potassium, lithium, calcium, magnesium, strontium, and barium (Col. 4, lines 19-67 and Col. 5, lines 1-33). The ashless dispersants of Wallace include polyisobutene succinimide (Col. 5, lines 38-67). See also Col. 8, lines 1-67; Col. 9, lines 1-67; and Col. 10, lines 1-52. The demulsifying agent includes poly(alkylphenol) formaldehyde condensates and the polyalkyleoxy modified reaction products thereof (Col. 10, lines 53-67). See also Col. 11, lines 1-67 and Col. 12, lines 1-3. The additive composition of Wallace may also include antioxidants such as one or more phenolic antioxidants (Col. 14, lines 14-28). Other components of the additive may include corrosion inhibitors (Col. 14, lines 29-67 and Col. 15, lines 1-16), cold flow improvers, pour-point depressants, antifoam agents, cetane improvers (Col. 15, lines 17-32). The amount of dispersant added is in a range of 0-15,000 ppm (or, 0 – 1.5 wt%). Wallace also discloses a method of improving the combustion characteristics of an at least predominantly hydrocarbonaceous liquid fuel during combustion in an engine, burner, or other combustion apparatus which comprises operating said engine, burner or other combustion apparatus on an at least predominantly hydrocarbonaceous liquid fuel containing a minor combustion-improving amount of the additive (Col. 21, lines 56-67).

The types of fuels disclosed by Wallace are listed at Col. 12, lines 61-67 and Col. 13, lines 1-13), wherein said fuels are intrinsically available for common use at a temperature of 20° C.

The difference between Wallace and the presently cited claims is the requirement that the additive is the form of a gel, the ratio of the detergent to the dispersant is of about 10:1 to about 1:10, the total base number is from about 100 to about 400, and the composition is used for reducing soot, NO<sub>x</sub>, hydrocarbons emissions.

Higton, which is drawn to compositions useful in fuel and lubricating oil compositions (Col. 1, lines 7-10), discloses that the compositions are in the form of a gel (Col. 2, lines 18-43), and wherein the compositions include an ashless dispersant, an overbased metal detergent (Col. 3, lines 11-26), and antioxidants (Col. 5, lines 8-13). The ashless dispersants include succinimide dispersants, Mannich dispersants, etc. (Col. 5, lines 62-67; Cols. 6-10; and Col. 11, lines 1-22). The overbased detergent includes sulfonates, phenates, salicylates, etc. (Col. 11, lines 23-67 and Col. 12, lines 1-27). The antioxidants include dihydrocarbyl dithiophosphate metal salts (Col. 14, lines 46-67; Col. 15, lines 1-67; and Col. 16, lines 1-12). Other additives include metal rust inhibitors, viscosity index improvers, corrosion inhibitors, friction modifiers, anti-foaming agents, anti-wear agents, pour point depressants, and rust inhibitors (Col. 14, lines 46-55; Col. 16, lines 13-67; and Col. 17, lines 1-32). Further, it is disclosed that the ratio of the dispersant and detergent is about 1:1 to 8:1 (Col. 3, lines 40-46). The amounts of the various components are disclosed in the table shown in Col. 17 of Higton. The

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overbased detergents of Higton have a TBN (total base number) of from about 250 to 450 or more (Col. 11, lines 39-41). The composition of Wallace in view of Higton will intrinsically provide reduced emissions as the composition of Wallace in view of Higton corresponds to the presently claimed composition as set forth above. Further, "from the standpoint of patent law, a compound and all its properties are inseparable," *In re Papesch*, 315 F.2d 381, 391, 137 USPQ 43, 51 (CCPA 1963). Moreover, where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977), and further "when the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not," *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). In fact, "products of identical chemical composition can not have mutually exclusive properties," and a chemical composition and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). It would have been obvious to one of ordinary skill in the art to use Higton's dispersant to detergent ratio and overbased detergent TBN in the composition and method of Wallace because the resulting composition will exhibit improved dispersant properties satisfying more rigorous performance requirements in the automobile industry (Col. 2, lines 9-12), thereby obtaining the invention as set forth in the presently cited claims.

9. Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wallace in view of Higton as applied to claims 1, 4-8, and 11-27, and further in view of Orr (U.S. Patent Number 6,652,608).

The difference between Wallace in view of Higton as applied to claims 4 and 12-27 is the requirement of organometallic fuel borne catalysts of Na, K, Co, etc.

Orr discloses at least one high heating combustible compound containing at least one element selected from the group consisting of aluminum, boron, bromine, bismuth, beryllium, calcium, cesium, chromium, cobalt, copper, francium, gallium, germanium, iodine, iron, indium, lithium, magnesium, manganese, molybdenum, nickel, niobium, phosphorus, potassium, palladium, rubidium, sodium, tin, zinc, praseodymium, rhenium, silicon, vanadium, strontium, barium, radium, scandium, yttrium, lanthanum, actinium, cerium, thorium, titanium, zirconium, hafium, praseodymium, protactinium, tantalum, neodymium, uranium, tungsten, promethium, neptunium, samarium, plutonium, ruthenium, osmium, europium, americium, rhodium, iridium, gadolinium, curium, platinum, terbium, berkelium, silver, gold, dysprosium, californium, cadmium, mercury, holmium, titanium, erbium, thulium, arsenic, antimony, ytterbium, selenium, tellurium, polonium, lutetium, astatine, mixture thereof, including organic and inorganic derivatives (Col. 56, lines 17-47). It would have been obvious to one skilled in the art to add the catalyst of Orr to the additive composition of Wallace because the addition of said catalyst would result in an improvement in the combustion of a fuel to which the additive would be added (Col. 56, lines 13-17), thereby obtaining the invention as set forth in claim 9 of the present application.



***Double Patenting***

10. Claim 27 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/603,644.

The rejection is adequately set forth in paragraph 16 of the office action mailed June 27, 2005 and is herein incorporated by reference.

***Response to Arguments***

11. Applicant's arguments filed September 16, 2005 have been fully considered but they are not persuasive. Specifically, applicant argues that (i) the 102(e) and 103(a) rejections under Burrington (U.S. Patent Number 6,843,916) are overcome because the Burrington patent and the applicant's invention were commonly owned at the time of the invention by The Lubrizol Corporation (see page 9, lines 18-20), (ii) the obviousness-type double patenting rejection over copending application number 10/603,644 is overcome because of the statement that at the time of the invention the present application and said copending application was commonly owned (see page 10 of the remarks, lines 14-15 and lines 22-23).

With respect to the argument in (i), applicant's statement of common ownership at the time of the invention overcomes the claim rejections set forth under 35 U.S.C. § 103(a) but not the claim rejections set forth under 35 U.S.C. § 102(e). However, reference Burrington (U.S. Patent Number 6,843,916) additionally qualifies as prior art under another subsection of 35 U.S.C. 102, and therefore, is not disqualified as prior art under 35 U.S.C. 103(c). Applicant may overcome the applied art either by a showing

under 37 CFR 1.132 that the invention disclosed therein was derived from the invention of this application, and is therefore, not the invention "by another," or by antedating the applied art under 37 CFR 1.131.

With respect to the argument in (ii), a statement of common ownership at the time of the invention is not sufficient to overcome an obviousness-type double patenting rejection. As described in M.P.E.P. § 800 generally and specifically M.P.E.P. § 804.02, the obviousness-type double patenting rejections can be overcome by filing a proper terminal disclaimer. It is to be noted that although the applicant states at line 18 on page 9 of the remarks that a terminal disclaimer has been provided, no terminal disclaimer seems to have been filed by the applicant. As the applicant has not filed any such terminal disclaimer, the obviousness-type double patenting rejection is adequately set forth in paragraph 16 of the office action mailed June 27, 2005 and is herein maintained. However, the corresponding 35 U.S.C. 103(a) rejection is overcome by applicant's statement of common ownership at the time of the invention.

### ***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shruti S. Costales whose telephone number is (571) 272-8389. The examiner can normally be reached on Monday - Friday, 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SSC  
Shruti S. Costales  
December 12, 2005

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